Volume 2, Issue 11
October 2020

ARMY COMMUNICATOR

S-6 in Action

Plus:

- ***Cloud Storage Solutions***
- ***Branch Week***
- ***Signal History***

FROM THE CIVIL WAR TO WINNING IN THE ERA OF GREAT POWER COMPETITION
U.S. ARMY SIGNAL CORPS
1860 - 2020
160 YEARS OF EXCELLENCE

Contents

The Army Communicator is published as a command information e-publication for the men and women of the United States Army Signal Corps under the provisions of AR 360-1.

Opinions expressed herein do not necessarily reflect the views of Office, Chief of Signal, the US Army or the Department of Defense.

Submit articles, photos, graphics, videos, story ideas, and nominations for "Signal Spotlight" to the editor here. For additional information, please call (706) 791-7384.
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On the Cover

An important role of the National Training Center is to help units become Fully Mission Capable.
US Army photo

Signal Regimental Team

Welcome to the October edition of the Army Communicator, and for those of you who adhere to the fiscal calendar, Happy New Year!

The fall is traditionally a season of change, and that's especially true this year. Serving in the military requires many things, not the least of which is a frequent change of address. However, if there's one thing this nomadic lifestyle has taught us, it's that regardless of the place where we call home, it's the people that make the experience. We must do our best to remember that at the end of the day we're just fellow citizens working together to make each day better than the last, for both ourselves and future generations. As our nation prepares for next month's elections and political discourse continues to monopolize the headlines, it is important our actions and speech are aligned with the Army Values, that we vote and fulfill our civic responsibility, and that we encourage civility when sharing opinions and perspectives.

We, as members of the Armed Forces, are part of an incredibly diverse team that trains together, deploys together, laughs together, and comes together to defend one another. It is a privilege to wear this uniform, but it is an honor to stand in arms with you, my fellow Soldiers.

Thank you again for all that you do for the Army, for the Signal Regiment, and for each other.

Please enjoy this issue, and if you have any ideas of suggestions for coverage, please let us know.

Pro Patria Vigilans!

COL John T. Batson
Signal School
Commandant

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Making your C2 Enterprise facilitate your leadership

Lt.Col. Rett B. Burroughs
Senior Signal Trainer

1 SBCT, 2ID Soldiers at an observation post.
Photo by Vulture Team Audio Visual.

What should Commanders focus on with regards to Command and Control systems that the S6 should be closely supervising and managing for the commander? Often times we see commanders ignore C2 systems and then arrive at the National Training Center without ever directly understanding his or her full communication capabilities. Once the team is on the ground at NTC it is too late for commanders to pay attention to what the S6 has or has not been doing in garrison and unfortunately, many units go into the box handicapped from a C2 perspective.

What should a commander do for the train up at home station? What should the commander expect the S6 to do to ensure communications platforms are operational and operators know how to operate them? The trends we see at the NTC are across a broad spectrum from, "my SIGO doesn't know what they are doing," to, "We know how to use our systems and are ready to roll." How does a Commander set him or herself up for success? What steps should you take to properly lead and mentor that S6 through the home station training experience to ensure the team is ready to roll into the box? There are five different areas on which commanders should focus their attention while directing the S6 to educate the S3, XO, and Commander. Those five areas are RETRANS, Equipment Status Report /Maintenance, PCC/PCI, Priority of Work, and Communicating up and down.

Before we delve into each of the areas, let us define Fully Mission Capable. There is a divide between Signaleers and Combat Arms leaders when it comes to defining FMC. A Signaleer may define FMC when they are able to get a connection between nodes and then proceed to tell the commander that a commo check is complete without ever proving actual connectivity between nodes. This does not account for end user equipment and the validation that a person at one node can successfully talk to another human on the other side of the line. This is where we must be clear on our definition of

FMC. Commanders can further validate FMC by directing the S3 to conduct the Mission Command Validation, ensuring all operators know how to use their assigned systems and can successfully perform their required missions.

FM RETRANS is the most common platform used at the National Training Center by rotational units. While most units come with radios FMC in their vehicles, they will fail to anticipate the tyranny of distance and not prepare RETRANS teams for the rotation. Constant training and validation of RETRANS is key to success. Commanders should expect the S6 to establish the RETRANS teams every week during motor stable Mondays. Verifying that all equipment is present, FMC, and the team knows how to deploy the entire system from the generator to the equipment needed for a minimum of 3 channels. Can your teams move at night? This continues to have a negative impact during rotations. Most importantly, the commander MUST enable the S6 by providing and protecting the time, resources, and personnel from other distractors that often consume the S6 at home station.

2 ABCT, 1st Armored Division Tactical Operations Center working through battle drills
Photo by Vulture Team Audio Visual.

Understanding the ESR and maintenance is seen as shortfalls within the Signal community. The S6 does not know how to acquire parts for Signal systems or bench stock for the myriad systems in a BCT. Poor maintenance and failing to validate systems at home station is evident when Signal systems arrive at NTC, typically in poor condition. Have the S6 track and brief all Signal systems, from the Joint Capability Release slant to pacing items (CPN, STT, HCLOS, etc.) and their status on the ESR. Is the JCR slant reflected on the ESR? Does the S6 attend the maintenance meetings? They must be present to ensure proper representation of the systems needing assistance. The S6 should be expected to turn on all Signal systems weekly. Protecting the S6 team from spending their time doing -10 level operator tasks such as turning on JCRs or filling COMSEC into radios will not only allow them to conduct proper maintenance on their systems, it will ensure operators are capable of maintaining their own systems when the S6 is not there to do it for them.

Pre-Command Checks/Pre-

Command Inspections (PCC/PCI) continue to hurt units at NTC. Commanders should not assume the S6 knows how to properly conduct PCCs nor that the Commo Chief understands PCIs. Layouts are no longer inherent in our culture and units pay the price each rotation, usually by leaving equipment at home station. Have the S6 explain how layouts are done and how PCC/PCIs are completed and followed through to complete sets. Have them show you a layout of your RETRANS team and provide your feedback on what right looks like. While this may seem petty, it could very well determine mission success out in the desert as you attempt to communicate with your unit at distance.

Protect your S6 shop from -10 level tasks and expect your S6 to show you how they are establishing priority of work. What is important to the commander is important to the S6. Often we see Signaleers doing basic operator level tasks due to lack of training and command influence. Most units come to the National Training Center and never achieve higher than 50% FMC on their JCR platforms. The average is below 30 percent. And while the S6 spends all of RSO&I getting JCRs and radios filled and validated, they neglect their Signal 20 and 30 level tasks that you rely so heavily upon in an austere environment.

How often is the S6 communicating up and down or talking to higher and lower? Is the S6 conducting a weekly or twice monthly S6 sync that is strictly enforced and synchronized with your staff battle rhythm? Have the S6 demonstrate to you what they are doing and who they are talking to when leveraging assets outside of the organization. If this is not done at home station, it will not happen at NTC.

Commanders who involve the S6 in their small group huddles, planning sessions, and day to day discussions will have better success when under the pressures that come with an NTC rotation. A commander who focuses on these five areas will have a better prepared organization when it is your turn. Your S6 should be able to explain to you where all of your communications equipment is in the formation, the status of each platform, and what is being done to get equipment to FMC and Signaleers trained and ready to fight. They cannot do that if you do not enable them through command influence down to the subordinate commanders. Having your S6 explain their understanding of the five areas covered here on a regular basis will allow you to provide continuous guidance with little time or effort on your part, will ensure you understand the capabilities and restrictions of your communications systems, and allow your S6 to adjust to your priorities. You provide the purpose, direction, and motivation, and your S6 will have the organization ready to communicate at the National Training Center.

2 ABCT, 1st Armored Division Battalion Tactical Operations Center working through battle drills. Photo by Vulture Team Audio Visual.

Building the next generation of Signal leaders

Maj. Kaden Koba and Maj. Kyle Barrett
Brigade S6, 16th Combat Aviation Brigade and Deputy G6, 7th Infantry Division, JBLM WA

Seventh Infantry Division is leading the way in bridging the institutional to operational professional development gap with the implementation of their division Battalion S6 Certification Course at Joint Base Lewis-McChord. The 7ID G6 section just hosted the fourth quarterly iteration of the Battalion S6 Certification Course. The program is open to officers and NCOs across JBLM, including 7ID, I Corps, 593rd Expeditionary Sustainment Command, and 51st Expeditionary Signal Battalion.The primary audience for the course are those young officers and non-commissioned officers who are selected to serve as Battalion S6s prior to attending the Signal Captains Career Course or Battalion S6 Course at Fort Gordon, GA. These officers are serving as primary staff officers, responsible for managing command and control systems to enable their commander to exercise mission command. Some students are branch detailed lieutenants who previously served as platoon leaders or XOs in Infantry, Armor, or Field Artillery units, while others have served as Signal platoon leaders or company executive officers.

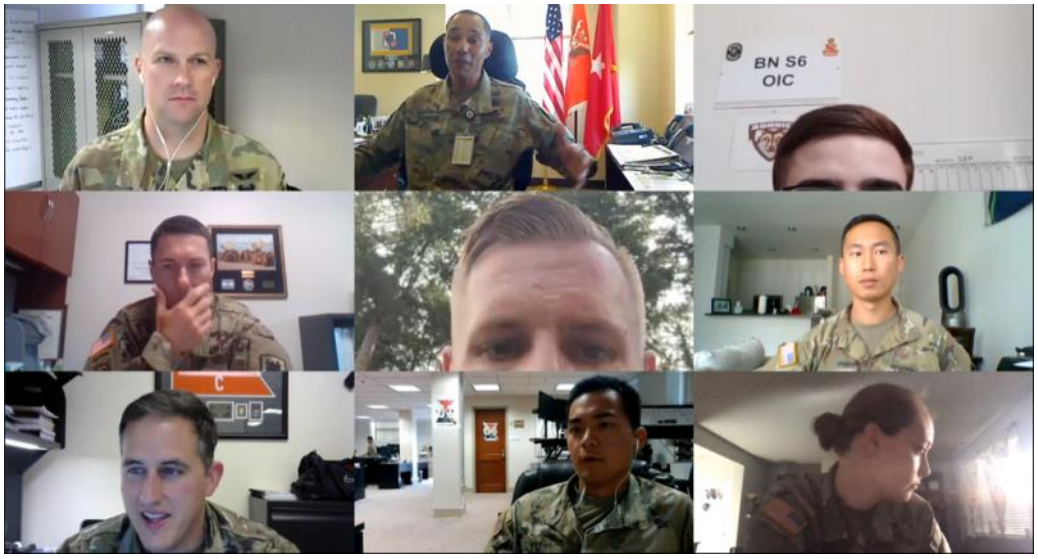
7ID Commander's command philosophy. Courtesy graphic

The course combines technical and doctrinal education with mentorship from senior officers and NCOs. In line with the Division Commander, Maj. Gen. Xavier T. Brunson's priorities, the course is designed to train junior Signal officers to be Effective, Energetic, and Engaged within their organization, certifying them to meet the communications requirements of today's warfighters. Course instructors include former battalion and brigade S6s, and technical experts from the Division staff including warrant officers and network engineers. NCOs from the rank of sergeant through sergeant major also shared their expertise and experiences.

The course starts with an overview of the role and responsibilities of the S6. The discussion, led by former battalion and brigade S6s, includes expectations, rela-

tionships, and resources available. The instructors then provide a detailed explanation of the Military Decision-Making Process and the S6's role in The Operations Process. The course then covers some of the systems and technical aspects of the S6 job including Mission Command Systems, Client and Server Operations, networking, WIN-T, Spectrum Management, Combat Net Radio, Cybersecurity, and COMSEC. The course concludes with intensive classes on maintenance and training followed by an in-depth discussion on how to build a Concept of Signal Support as part of the MDMP process. The capstone event of the course includes a board of field grade officers evaluating the students as they brief their own Concept of Signal Support, followed by a comprehensive online final exam.

Beyond the curriculum, 7ID G6 invited guest lecturers to host discussions with the students throughout the course. Guest lecturers during this last iteration included several previous and current battalion commanders, a Signal first sergeant, and Brig. Gen. Edmondson, FORSCOM G6. Brig. Gen. Edmonson offered mentorship and guidance to the students on "how to be an effective Leader, Team Player, and Communicator." All the guest lecturers shared their guidance, experience, advice, and expectations for leaders, staff officers, and Signaleers, which exposed students to a wide variety of perspectives from leaders of varying backgrounds.



Microsoft Teams class session with guest speaker, BG Robert Edmonson FORSCOM G6.
Courtesy photo

The 7ID also continues to learn and grow through the program, using student and instructor feedback to improve the course. One of the biggest changes to the course has been the adaptation to COVID-19 social distancing restrictions. The G6 staff are currently hosting the course using Microsoft Teams. The 7ID has been piloting Microsoft Teams for the Army, and the S6 Certification Course is one of several courses offered through their Microsoft Teams based Bayonet Academy Online. It allows them to share presentations, files, briefings, and classes through text, audio, and video.

By the end of the week, students have a solid technical and doctrinal grounding to serve as Battalion S6s. More importantly, these young officers now have both a peer and mentor network within and beyond the Signal community to further their development and education. They know where to go and who to ask for questions on doctrine, leadership, and technical execution. The 7ID Battalion S6 Course provides not only an educational opportunity for these officers, but builds the team of Signal and Army professionals across the Army. It serves as a model that other Divisions and installations could use to develop their own officers and teams.

Cloud storage solution for a CID Battalion

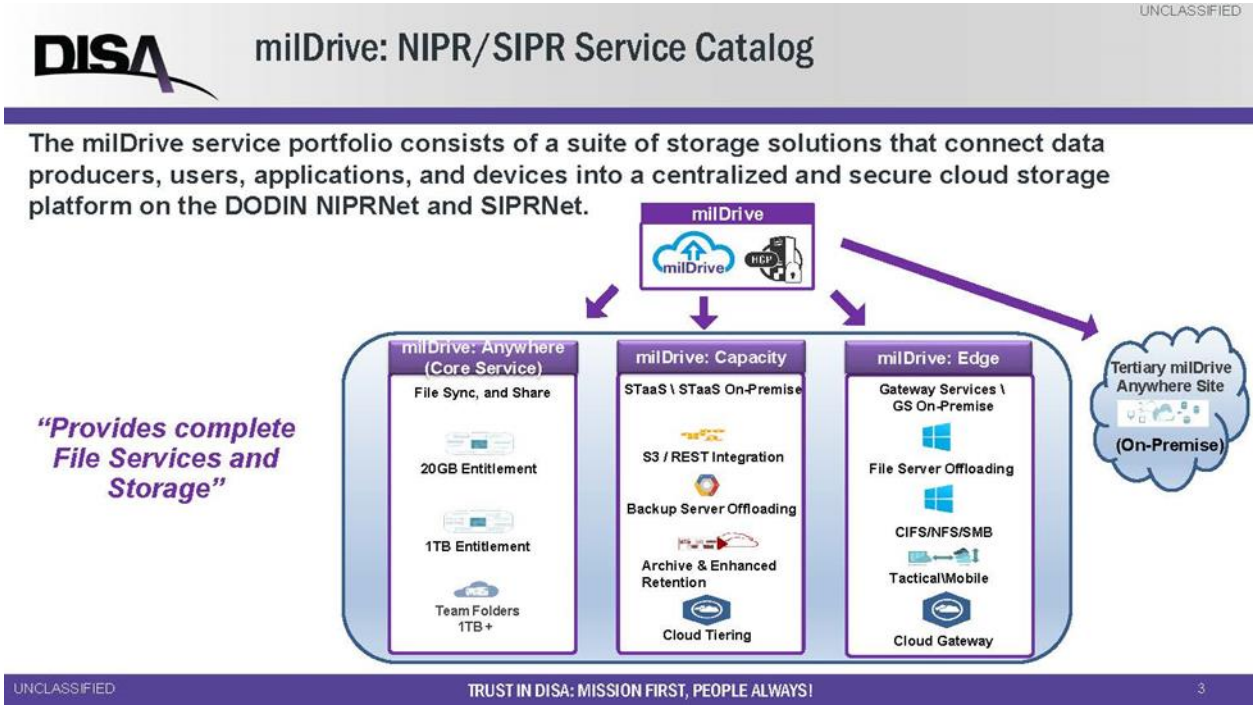
Cpt. Mike J. Martinez
502D MP BN (CID) S6 OIC

The 502D Military Police Battalion (CID) is a small specialized unit that conducts intelligence driven preventative police operations and felony level criminal investigations. The unit's mission is supported by Special Agents and staff that rely heavily on Network-Attached Storage (NAS) or Storage area network (SAN) provided the local Network Enterprise Centers (NECs). The Battalion Headquarters resides on Ft. Campbell with geographically separated Detachments on five other installations. The 502D MP BN (CID) face unique Information Technology challenges due to their geographic separation and determined a cost effective solution is milDrive cloud storage. The ability to access stored documents from remote locations is a mission critical requirement.

The inability to secure sufficient data storage over the network at a reasonable cost without threats of data loss, cybersecurity incidents, or access restrictions was the biggest challenge faced by 502D MP BN (CID). Some units within our organization were charged $5k/year for 1TB of storage space. Once the capacity exceeded the 1TB threshold, there was an automatic charge of an additional $5k for an extra 1TB.

The ability to share data containing large files, photos, and videos across installations managed by different NECs was also a challenge to the CID mission. The available web-based Knowledge Management tool did not meet the storage space requirements, nor did it offer access diversity. Our organization identified a need to seek other viable storage solutions.

The solution was identified when DISA finally advertised its milDrive: Anywhere cloud storage platform. Our unit immediately volunteered to be the pilot Battalion for this initiative. After a short period of testing, we quickly realized the platform as a feasible solution. Mildrive is a cost efficient cloud based storage solution, which provides a 20GB license for each user and can be easily configured and managed on DEPO. To support team



Courtesy graphic

requirements, 1TB of storage was purchased at an extremely low cost with the option to purchase additional storage space.

MilDrive: Anywhere has streamlined information shared between CID offices, Battalion Staff, and outside organizations, enhancing the collaboration capabilities between individuals and eliminating the requirement to transmit large files attached to emails. milDrive: Anywhere extends traditional file services by allowing users to file sync, share, and perform self-service backup and recovery actions.

Courtesy graphic

The platform provides units with the capability to manage LES or PII files and folders securely on any device, while the data is at rest or transmitted within the DODIN through the use of Government Funded Equipment (GFE); a workstations, mobile device, or tablet and web access services. Licensed users are able to download the milDrive: Anywhere application on a DOD Mobility Unclassified Capability Device and can access the data on the go, as well as transfer attachments from Email+ to the milDrive: Anywhere application platforms.

Mission accomplishment increased during normal operations and travel restrictions due to COVID-19 has made it immeasurably valuable. CID Battalion Headquarters visit each subordinate office once a quarter to review investigations and all associated documentation. Remote reviews were greatly enhanced during COVID-19 travel restrictions by using cloud based features unrestricted by diverse NEC practices. With milDrive: Anywhere, CID offices can collaborate on an audio/video recorded interview with another office or have it reviewed at Battalion. The same flexibility is applicable to crime scene photos, notes, sketches, sworn statements, and other files not easily transmitted via email.

The implementation of cloud computing within our CID Battalion mitigated costly challenges and provided a globally accessible storage solution while conducting Investigative Operations. Global accessibility allows Special Agents to maintain their licenses as they move between duty stations. DEPO configured licenses are easily managed, accessed, and stored on GFE and personal devices using the milDrive: Anywhere application, making it a via storage solution for all of CID.

USMA Branch Week exposes cadets to the Signal Branch

Cpt. R. Andrew DeLucio
25 Career Program Manager and Cadet Accessions Officer

Every year, representatives from the Army's basic and special branches converge on the United States Military Academy (USMA) at West Point for Branch Week. Proponents from each branch highlight their respective field with static displays positioned along the *Apron* of the parade field known to the Corps of Cadets as *The Plain*. During this week, however, this field is anything but plain. Rotary wing platforms, weapon systems, and other examples of high-tech equipment from across the service turn the lush green grass into an awesome display of military might highlighting the technical prowess of the Army. While the Aviation branch dominated much of the field and Field Artillery pieces, Armored tanks, and Air Defense surface to air systems crowded Thayer Road, each branch was well represented on the southern paved edge of the field.

Branch Week, an annual event hosted by USMA's Department of Military Instruction (DMI), is designed to better inform the USMA cadet population and help these leaders and soon-to-be Officers explore career opportunities that may best fit their talents. Though the week was conducted a little differently this year due to ongoing concerns related to COVID-19, Branch Week is arguably one of the most critical branch educational experiences the Corps of Cadets will have during their time at the Academy. Throughout the week, USMA hosted engagement opportunities for branches to engage with cadets that have the branch as a top preference. The week's events also included a Profession of Arms panel which highlighted the diversity and variety of branches.

A US Army Signal representative talks with USMA cadets
Courtesy photo

The US Army Signal Regiment team sets up there display at Branch week. Courtesy photo

The US Army Signal Regiment was there in force. This year's Regimental static display demonstrated the lethality of the Signal Corps by highlighting our enhanced expeditionary digital network capabilities. These enhanced capabilities come as a result of work the Regiment has done over the last few years to identify how it can best support the warfighter. The Regiment has used the Joint Communications Support Element (JCSE) and the Commercial off the Shelf (COTS) equipment the unit regularly employs as a model to capture lessons learned. Kit capabilities are currently being demonstrated by 50th ESB-E, of which supports an Immediate Response Force (IRF) mission.

A communications team under the direction of CPT Cate Hogan from 50th Expeditionary Signal Battalion – Enhanced (ESB-E) supported the Signal Corps static display with a medium communications package. As highlighted in the September edition of the *Army Communicator*, "Update on ESB – E", the support package includes a 1.3m Hawkeye terminal that has tri-band capability and is intended to be rapidly deployable by a four-person team. The kit is coupled with a Voyager 8 KLAS-Telecom chassis that supports up to four secure network enclaves, making it tailorable to any mission set. Redundancy on the battlefield is always integral to the success of communications support. Capabilities demonstrated during Branch Week included the kit's ability to provide fallback services across a cellular network using Cradlepoint technology.

Integral to a successful display is having the right personnel. They need to be both technical and interpersonal while also having the ability to communicate and engage in dialogue with others. Cadets wanted to talk to Soldiers and the Soldiers selected by 50th were able to provide cadets with candid feedback about their experiences in the branch. Having the communications capability allowed the accessions team to provide on-demand accessions resume portfolio feedback to cadets, integral when trying to recruit talent on the ground.

Cadets gravitating toward the static display found the mobile broadband capability that the kit could provide unique and in line with what they hope the future of the Signal Regiment will bring – a simpler, smaller, and more streamlined solution to communications on the battlefield.

Talent Based Branching – Cadet Accessions in a COVID environment

Cpt. R. Andrew DeLucio
25 Career Program Manager and Cadet Accessions Officer

The Office Chief of Signal Officer Division (OCOS-OD) has the responsibility of supporting the Talent Based Branching (TBB) cadet accessions process. This includes finding and harnessing cadet talent that the branch finds most desirable based on knowledge, skills, behaviors, and intelligences (KSBIs). ADP 6-22 provides a normative baseline for Officers in that every Officer must possess attributes (who an Officer is) and competencies (what an Officer does). Talent management builds upon this baseline and identifies, develops, and employs an Officer's unique SKBIs. With respect to TBB, the branch is responsible for the 'identifying' part of talent management. While not comprehensive, all branches develop talent storyboards that include KSBIs that define success in a branch. These talent demands are approved by Branch Commandants and certified by the CAC Commander. The combined list of talent demands serves as the basis for review of a cadet's resume portfolio which includes a cadet self-assessment, staff and faculty talent evaluations, Talent Assessment Battery (TAB) feedback and HQDA G-1 talent assessments. Cadets ultimately receive branch ratings based on the branch's perceived talent alignment.

ADP 6-22 Leadership Attributes
Courtesy graphic

Fort Knox, KY is home to the Reserve Officer Training Corps' (ROTC) annual Cadet Summer Training (CST) Advanced Camp. CST is a culminating training event for roughly 7,000 soon-to-be-commissioned cadets. In a similar fashion to USMA's Branch Week, CST supports a branch orientation opportunity for cadets to learn about branches and future career opportunities. This attempts to provide a conceptual overview of all branches while also helps to further inform and educate cadets on a branch of interest. In May, US Army Cadet Command (USACC) canceled CST 2020 amidst COVID-19 safety concerns. USACC emphasized that the onus would be on contiguous universities to consolidate resources to train and address these core skills deliberately. These training events were operationalized as Operation Agile Leader. The cancelation of CST limited the ability for branches to engage with cadets on ground and in person and was a missed opportunity for ROTC cadets to see branch displays. As a result, the pandemic gave rise to a TRADOC Virtual Branch Orientation (VBO) initiative.

A new VBO web portal, https://oema.army.mil/branching_public/index.htm would soon capture all of the things that make a branch unique and highlight them online, providing a virtual form of education for cadets. The onus was on the individual branches to produce

INTELLIGENCES: Interpersonal, Logical-Mathematical, Spatial

SKILLS: Signal officers lead Soldiers and organizations that provide dynamic communication networks and information systems enabling mission command from the national command authority to the tactical edge. They are mentally tough and possess strong interpersonal skills which enable them to develop positive relationships and build effective teams. They are technologically adept problem solvers skilled at leveraging the latest technologies and practices and, are responsible for determining project requirements in a rapidly changing, complex environment. They clearly articulate the highly-technical components of the signal community into operational terms providing the warfighter with a common operating picture. They are lifelong learners able to pursue continuing education in leadership, management, information technology, and other domain-specific disciplines.

KNOWLEDGE: The Signal branch values officers with academic backgrounds from a wide variety of disciplines and majors. However, the domain-specific disciplines listed below provide officers with the expertise needed to manage information, leverage technology, and deliver effective communications.

- **RELEVANT EDUCATION:** Organizational Leadership/Management; Applied Sciences & Engineering; Computer Engineering; Computer Science; Computer Systems & Technology; Electrical Engineering; Engineering Management; Information Operations; Information Systems; Information System Security / Assurance; Mathematical Sciences; Systems Engineering (not all inclusive).
- **RELEVANT TRAINING / EXPERIENCE:** Cadet Troop Leading Time / Leader Development Time (CTLT / CLDT); Academic Enrichment Program with higher education / research agency in degree field of study (not all inclusive).

BEHAVIORS: (In addition to foundational)

ADAPTABLE	CAREFUL	DETAIL FOCUSED	FLEXIBLE	PROBLEM SOLVING
AGILE	COLLABORATIVE	DILIGENT	INITIATIVE	PROACTIVE
ALERT	COMMITTED	DISCIPLINED	INNOVATIVE	RATIONAL
BALANCED	CONFIDENT	EXPERT	PRECISE	RESILIENT

TALENT PRIORITIES:

1. **MENTALLY TOUGH:** Stress tolerant and emotionally mature. Performs well even under extreme psychological duress.
2. **COMMUNICATOR:** Precise, efficient, and compelling in both written and spoken word.
3. **INTERPERSONAL:** Skilled in developing appropriate relationships. Able to connect with others to effect positive results
4. **PROBLEM SOLVER:** Able to choose between best practices and unorthodox approaches to reach a solution. Accomplishes the task.
5. **PROJECT MANAGER:** Able to determine, requirements, develop work processes, delegate responsibilities, and lead teams to desired outcomes.
6. **TECHNOLOGICALLY ADEPT:** Understands and comfortably uses the latest technologies.

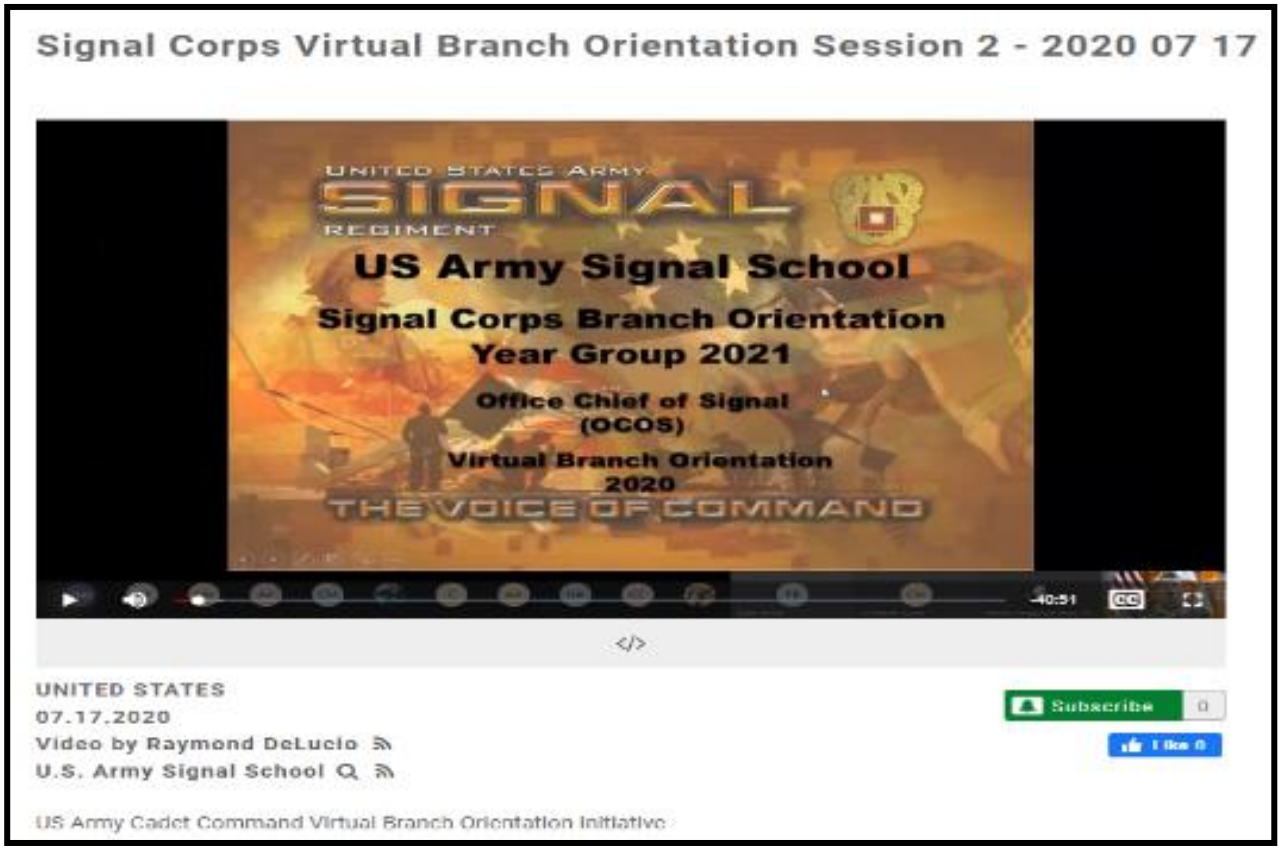
Signal Branch FY21 Talent Demands
Courtesy graphic

content that promoted the branch. With the help of the Fort Gordon Knowledge Management team, the Signal Branch accessions team lead and VBO Action Officer, Andrew DeLucio created an informational branching webpage for cadets. The webpage, https://cybercoe.army.mil/SIGNALSCH/OCOS/branch25.html, resides on the Cyber Center of Excellence (CCoE) web domain, is accessible to all, and includes CMF 25A branching informational material specific to cadets. The team also produced a variety of additional multimedia content including a video message from the Signal School Commandant, Col. John Batson, a video compilation of testimonies and experiences of Signal Officers, and a branch promotional video. The branch leveraged and continues to leverage social media with the Signal Regiment Facebook page and the Signal School DVIDS page. What makes this TRADOC branching portal special is that each branch promotes itself differently and the VBO portable it is openly accessible for all cadets, regardless of commissioning source or commissioning year. Now that this capability exists, future branching cohorts will have the ability to view material as the next generation VBO portal will be available for all sources of commission, including the Academy and the Officer Candidate School.

In addition to the creation of a branching portal, there was a deliberate and focused effort to conduct branch orientations leveraging collaboration tools available. The intent was not only to provide a virtual briefing to further educate and inform cadets on the branch but to create an environment in which cadets could ask branch related questions much like they would have been able to at CST. The Signal branch leveraged Commercial Virtual Remote (CVR) Microsoft Teams to host two VBO sessions during one week in the summer. The branch leveraged the talents and career experiences of roughly 20 Captains Career Course Officers who had most recently served in Lieutenant level positions to promote the diversity and variety of the branch. The sessions reached and informed roughly 500 cadets and

can be reviewed on DVIDS U.S. Army Signal School Page. Prior to COVID, the accessions team began a deliberate outreach initiative that spanned across all nearly 300 ROTC programs with the intent to promote the branch. As a result of this initiative, the branch had already began doing its own form of VBO, leveraging collaboration tools such as Blackboard Collaborate. Through this outreach, the branch gave more than 20 branch orientations and extended its influence to roughly 2000 cadets. Outreach initiatives this summer have reached between 2500-3000 cadets.

An additional component to a cadet's resume is an interview. Previous accessions cohorts have not needed to interview for a career opportunity (branch of choice) until this year (although the EOD and Cyber branch has been interviewing cadets face-to-face for years). DA-G1 Director of Military Personnel Management (DMPM) instructed that all cadets in accessions cohort FY21 be given the opportunity to interview for a branch of interest. Pre-COVID, the plan of action for all accessions teams was to conduct on-ground interviews with the cadet population during CST and USMA Branch Week. As no plan survives first contact, the plan changed drastically once CST was cancelled.



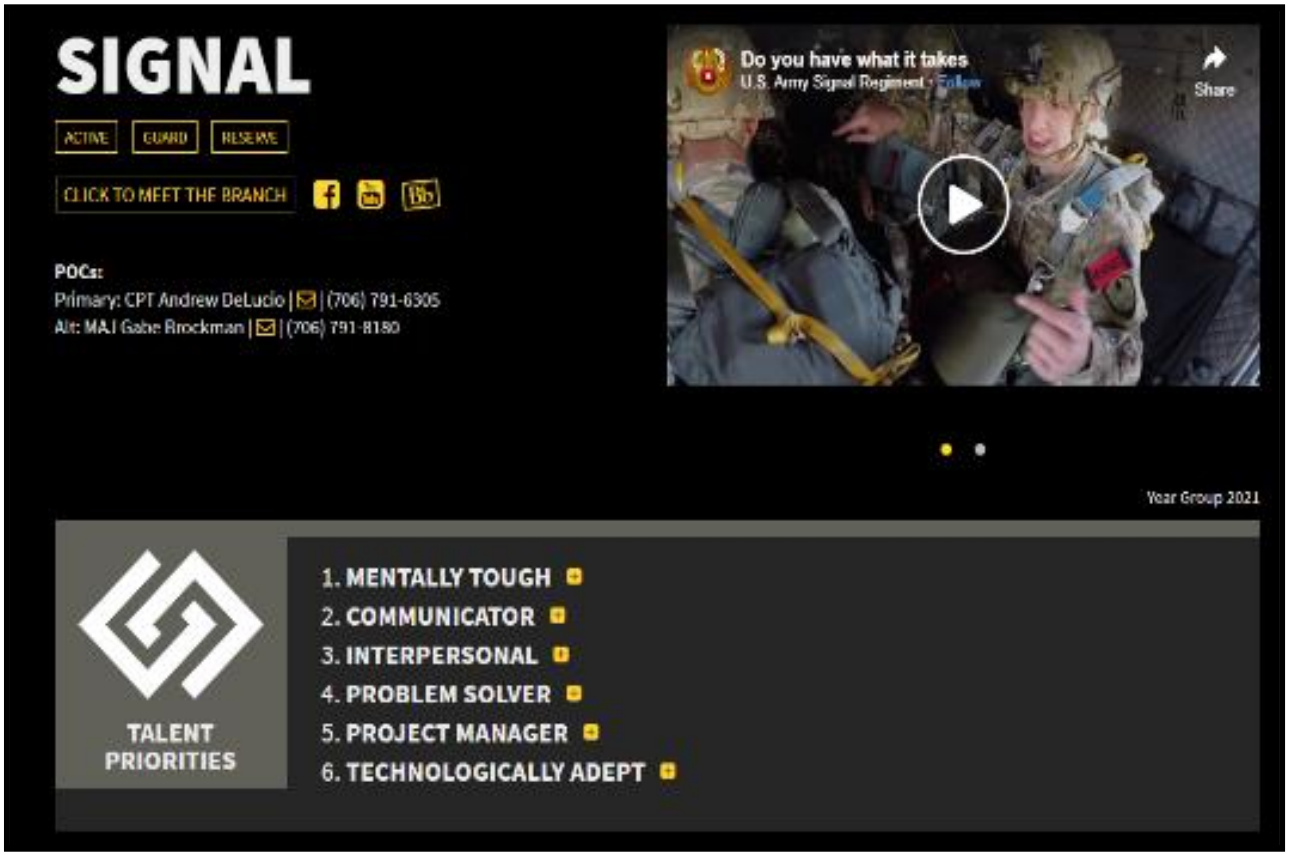
DVIDS VBO Session
Courtesy graphic

The Engineer and Cyber branches had piloted implementing on-demand interviews into their accessions process using HireVue as the platform of choice earlier in FY20. As the tool was already being considered for implementation, COVID-19 nudged us in the direction that we were already headed. Ultimately, this tool baselines the interview process across the USMA and ROTC sources of commission. Midsummer, all cadets received an email invitation by HireVue to access a portal allowing a cadet to select a branch of choice to interview for. The Signal branch interview included roughly 15 video response, multiple choice, and essay questions and was approved by the Branch Commandant prior to release. Questions asked challenged a cadet's technical competencies and ability to communicate as well as allowed the branch to identify whether or not a

cadet is a leader and teammate. The interview window closed early in the fall with roughly 600 cadets across the ROTC and USMA populations having completed the Signal branch interview.

Just as the branch is hoping to align talents, cadets hope to find a career field that best aligns with his or her unique talents and also meets career aspirations. Prior to TBB, the cadet accessions process was solely Order of Merit List (OML) based. Under this legacy model, branches could only influence outcomes indirectly by shaping cadet preferences. This talent and market-based branching model isn't without its shortcomings - TBB doesn't always guarantee diversity. It is the branch's responsibility to ensure that there is a diverse talent pool of race and gender in that branch. As such, the Signal Regiment must continue to actively seek out and recruit diverse cohorts of cadets that align with branch talent demands. This model of talent alignment gives both the branch and the cadet an opportunity to weigh in on the branch selection process and, generally, plays out favorably for both.

New for the FY21 talent pool, the Branch Detail program is voluntary. The program gives commissioned Lieutenants the opportunity to serve in an operational branch (Armor, Chemical, Field Artillery, or Infantry) capacity until they attend their basic branch Captains Career Course PME. Cadets have always been required to preference an operational branch within their top five branch preferences. Cadets were also always able to volunteer for the program, however no cadet could opt-out. This left cadets to potentially be forced to Branch Detail depending on a variety of metrics, including OML and if branches had not met their accessions requirements. This year, the program is strictly voluntary, meaning cadets can opt-out if they want. Out of a cadet population of roughly 6,000 competing for Active Duty, Regiment will branch a little over 450 cadets with 30 percent of that presumably branch detailing into an operational branch of choice.



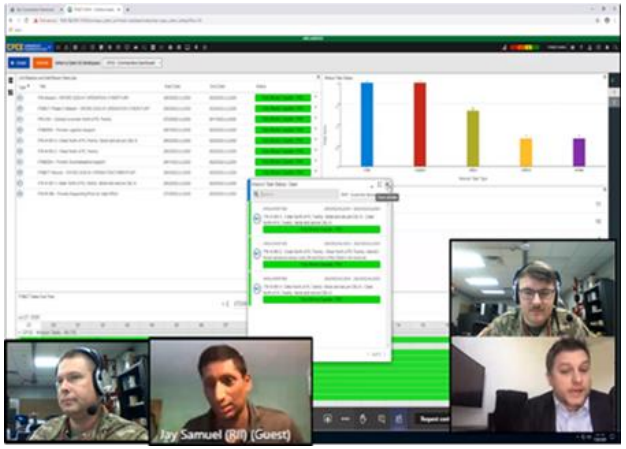
Cadet Branching portal
Courtesy graphic

915th CWB supports first Soldier Touch Point for the Army's new Cyber Situational Understanding tool

Dr. Jacob Cox
ACM Cyber Lead Data Scientist

Soldiers from the 915th Cyber Warfare Battalion (CWB) became the first to offer feedback on the Army's new Cyber Situational Understanding (Cyber SU) prototype. The feedback was obtained as part of a series of Soldier Touch Points (STPs) planned during the development of the Cyber SU software application.

Unlike other Cyber Mission Force tools, Cyber SU is an application for allowing maneuver commanders and staff to see how events in cyberspace, the electromagnetic spectrum (EMS), and the information environment affect the unit's mission. From these events, Cyber SU allows Commanders to understand mission impact, mission risk, and other concerns as they develop in the unit's Area of Operations (AO).



System evaluators provide visual and audio feedback on the Cyber SU prototype to vendors and sponsors using virtual technologies recently obtained by the Army.
Image provided by ACM Cyber

The three-day STP allowed Soldiers from the 915th CWB to evaluate the latest release of the Cyber SU application and provide feedback on how the system can best support Cyberspace Electromagnetic Activities (CEMA) staff to inform the Commander. In turn, this feedback will help inform how the technology can improve to best support echelons at Brigade through Corps.

Unique to this STP is that most of it was conducted virtually by organizations from disparate locations. Maj. Shana Gurley, Branch Chief for Cyber SU at Army Capability Manager Cyber, said, "The Army's decision to roll out virtual technology tools in support of social distancing requirements was essential to having program managers, capability managers, vendors, and evaluators all participate in this event."

The STP was initially planned as an in-person event until the COVID-19 pandemic made social distancing a requirement. In response, multiple organizations quickly came together to host the event remotely. Those organizations included Program Executive Office Command Control Communications-Tactical (PEO C3T) Mission Command Cyber (MC Cyber), Army Capability Manager Cyber (ACM Cyber), Cyber Battle Lab (CBL), and Research Innovations, Inc. (RII). As a result, the group created a unique opportunity to have focused conversations with each Soldier that, in some ways, was better than a traditional in-person event.

On-premise support for the event was handled by just a few facilitators, which included CW4 Alexander Adorno-Muniz, Dr. William Watson, and Mr. Shelby Reissman from ACM Cyber, MC Cyber, and CBL, respectively. Together, they provided setup support and supervision at Fort Gordon's Cyber Battle Lab. Beyond the participants from 915th CWB and local facilitators, all others attend-

ed the event virtually.

During the STP, RII—who was selected over 41 other vendors back in April to deliver the Army's first Cyber SU capability—led participants through a sequence of event-driven, exploration exercises using the new capability. In response, participants provided their feedback on the views and data provided by the Cyber SU application, which included describing their perceptions and actions as they worked through a cyberspace-based attack scenario.

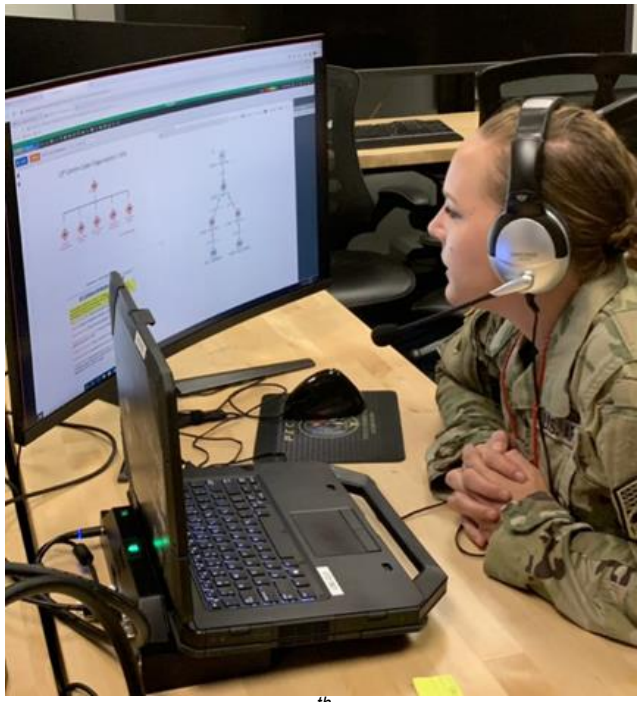
Afterward, participants were asked to describe what capabilities Cyber SU offers that are not currently found in a Tactical Operations Center (TOC). Sgt. 1st Class Christopher Knight, one of the STP participants, responded, "It offers a total picture of the battlespace. We don't have anything that ties in a lot of the outside resources to build an overall picture for the Commander."

Knight's observation represents one of the characteristics that makes the Cyber SU application so unique. Since the application is being built directly into the Army's Command Post Computing Environment (CPCE), it can directly contribute overlays covering all three layers of cyberspace to the Commander's common operational picture (COP). This is not a capability found in Tactical Operations Centers today.

For instance, CEMA staff must separately present the Commander with views from their system's terminal or brief the Commander from a presentation they prepare. Unfortunately, these methods pull the Commander's attention away from the COP, where maneuvering elements and mission progression are monitored. Doing so also delays the Commander's ability to achieve a complete situational understanding of the battlespace.

"Cyber SU being a part of the CPCE represents a significant step forward for mission systems," Adorno-Muniz said. "Instead of introducing another closed system that receives data, but doesn't share it, the Cyber SU application will be born in the CPCE where it can directly contribute to the Commander's understanding of the battlespace."

Adorno's comments allude to a specific requirement for Cyber SU to integrate with multiple systems in order to present views to the COP that allows commanders to quickly understand the impact and risk associated with events in cyberspace, the EMS, and the information environment. In turn, commanders can hasten their decision cycle during Unified Land Operations (ULO) and Multi-Domain Operations (MDO).



Spc. Lauren Sanchez, 915th CWB, completes an event-driven cyberspace incident scenario from the perspective of an intelligence analyst using the Cyber SU software application.
Photo by Dr. William (WW) Watson

Knight also appreciated the tool's customizability, stating, "Customization is good because every battle captain is going to do it differently."

Overall, the event was viewed favorably by both the participants and the event's orchestrators. In many regards, participants felt that meeting virtually worked better than if the organizations attended the event in person. Spc. James Hyman, another

participant from 915th CWB, stated, "Everyone was able to view our screen from their own terminal. Not having observers cluster around our terminal eliminated potential distractions."

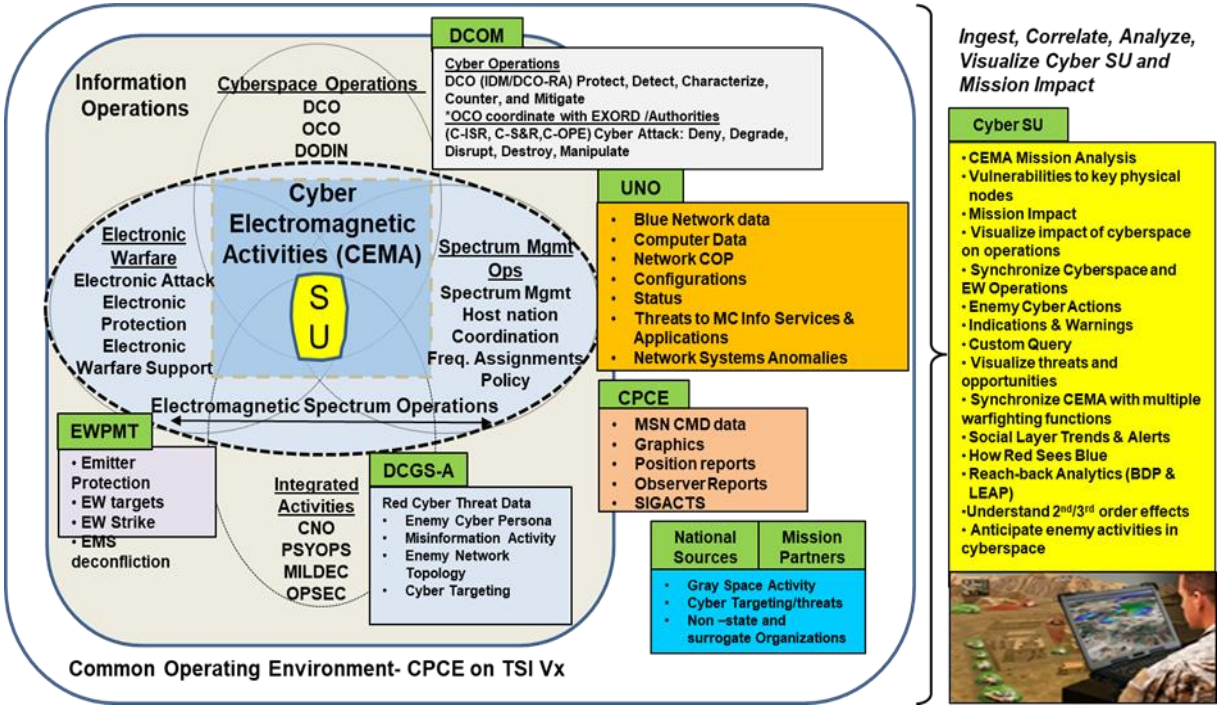
Maj. Jessica Tahilramani, PdM MC Cyber, went as far as to say, "I believe it's the ideal way to handle Soldier Touch Points going forward. Not only could we see the actions that participants took as they took them, we were able to include other team members in an event they might not otherwise be able to attend."

Master Sgt. Jennifer Harris, test lead for PEO C3T MC Cyber, who served as the event's moderator, added that being able to record the virtual exercise will allow her team to go back and review the participants' responses regarding the application's features and capture more detailed notes later.

RII likewise gained critical feedback that will help them to understand better the variety of disparate systems and sensors that Soldiers are currently using. Using this feedback, RII plans to determine how Cyber SU can best bring all this information together to provide a meaningful, mission-focused picture of the CEMA environment to the Commander's COP.

"The Soldiers validated many aspects of the Cyber SU prototype," said Mr. Doug Hopler Operational SME and Test and Evaluation Lead at RII, "and provided new insights into how we prioritize information and how they [Soldiers] want to see information presented and visualized."

According to Hopler, the efforts of these organizations to conduct this STP demonstrate that even in the face of COVID-19 social distancing requirements, Army innovation will continue to move forward in preparation for the future fight. "It's exciting to be able to figure out a way to get critical feedback while still taking steps to ensure the safety of all participants during the pandemic," he said.



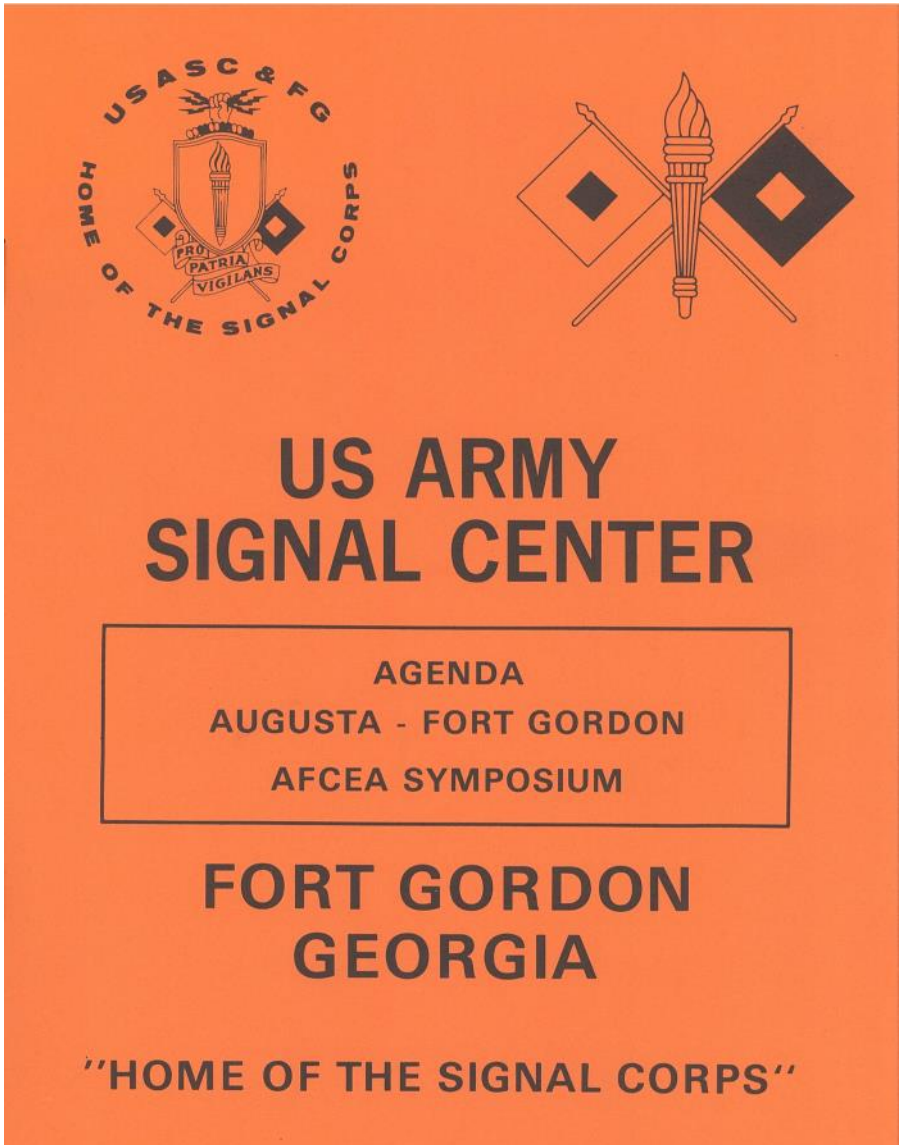
Cyber Electromagnetic Activities (CEMA) is the process of planning, integrating, and synchronizing cyberspace (CO) and electronic warfare (EW) operations in support of multi-domain operations (MDO) (FM 3-12). These tasks are complex and rely on multiple technologies to feed the Commander's situational understanding (SU) of the cyberspace domain through the lens of existing warfighting functions and capabilities.
Graphic courtesy of Army Capability Manager Cyber (ACM Cyber)

The Signal Corps vision of future warfare in 1980

Steven J. Rauch
Signal Historian

The first Armed Forces Communications and Electronics Association (AFCEA) symposium was held at Fort Gordon during August 1980. More than 225 participants from commercial communications companies and military communications organizations met to discuss future battlefield needs of the Signal Corps. The theme for the symposium was “Communications Requirements for Division and Corps 86 – the INTACS Update.” By the year 1986 the Army planned to update its entire communications system for units at the Division and Corps level under the Integrated Tactical Communications System (INTACS) concept. Among the topics discussed during the conference were challenges, as well as solutions, for data distribution, fiber optics, millimeter wave radio, frequency management, satellite systems just to state a few.

The commander of the US Army Signal Center and School, Maj. Gen. William J. Hilsman, hosted the symposium and offered his thoughts and insights into the challenges facing the Signal Corps in the 1980s and beyond. He discussed the importance of INTACS as the communications architecture that would drive tactical communications research and development of capabilities for the future. INTACS was based on the concept that in order to fight outgunned and out-numbered in situations with peer threats, such as the Soviet Union and North Korea, the US Army had to make maximum use of its people. Weapons systems had to be integrated and the Army would have to fight



Program for 1st AFCEA Symposium held at Ft. Gordon in August 1980. Signal Corps History Office historical collection

Maj. Gen. William J. Hilsman, commander US Army Signal Center and School 1977 - 1980.
Signal Corps History Office historical collection

with what it had; fix or repair what it had; and supply what it had.

According to Hilsman, "the way we are supposed to win is with these weapon systems we are all developing together and they do not work without communications to tie them together. Recently the book *The Third World War*, captured our attention with its description of a fast moving, lethal battlefield."

Not only was INTACS concerned with the future battlefield but also had to address current and near-term readiness for the Army to be able to fight at a moment's notice, particularly in Central Europe with the Warsaw Pact.

One of the biggest challenges according to Hilsman was, "in the area of battle management – command, control and intelligence - those headquarters that formerly moved every three days, today are going to be moving every 4-12 hours. Mobility with communications, to be able to set up or shut down the command post and still keep talking, is critical. Our communications systems call for reliability, redundancy, and robustness. R3 couldn't better define what the real issues are in terms of what we need and what we don't always find in our architecture."

Hilsman continued, "The com-

mand posts also need a mobile solution for the 1980s, a suite of equipment, all part of the INTACS system, all part of the update. Combat net radio SINCGARS, the Position Locating and Reporting (PLRS)/Joint Tactical Information Distribution System (JTIDS) hybrid are part of it. Another part of the suite is a return to high frequency (HF). HF went out of the INTACS plan in 1976, it is now approved back in as a major Army program. It left because it offered only 35 percent reliability while satellite seemed to offer an absolute solution. But with better frequency management and atmospheric sounding we are now able to attain 95 to 98 percent reliability on HF. Furthermore, cost and threats impact on total use of satellites. We have a requirement now, for long distance communications on the tactical battlefield with complimentary use of satellite and HF."

Hilsman concluded, "We really have to look out that we do not come up with a Signal Corps solution for the Signal Corps, we need a Signal solution for the fighters. When we make decisions, if we cannot fund everything, [then] we ought to fund those items that allow our combat forces to be effective. That is the way we have to think."

Another presenter at the symposium was Lt. Gen. Hillman Dickinson the Director, Command, Control, and Communications Systems for the Office of the Joint Chiefs of Staff. He provided some thoughts about the initiatives required to field systems that were survivable, interoperable, and capable. Above all Dickenson emphasized the ability to survive on the battlefields of the 1980s, stating "To survive our command posts have to move quickly – preferably before they are targeted by hostile artillery or air. To do that we cannot live with systems that take an inordinate amount of time to set up and tear down and which require a lot of vehicles to move. It is important to remember that C3 systems are competing with everyone else for transportation assets [such as] ammunition and trigger pullers."

Some solutions Dickenson envisioned were "Modularity [of components] is important to avoid catastrophic failures to the C3 system. Components are going to fail but when they do we should be able to readily pluck out the bad piece and replace it on the spot. Standardized wherever possible, we have the flexibility to take a modular component from a less important or inactive system and bring the key system back up. . . It would make good sense to use common systems like those being talked about in the military computer family wherever possible. With memory getting cheaper and bigger, each of these systems could simultaneously be updating an identical file in one or more of the other systems. If one system gets knocked out, for instance the intelligence system, the Intel staff could move over to the logistics computer and continue its very critical mission."

Since those leaders addressed important concerns about communicating on the battlefields of the late 20th century, one might assume, given the passage of 40 years that the problems for which they were seeking solutions in 1980 have been solved and are no longer concerns for the Army of the 21st century.

Or are they?


In the next
ARMY
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Communicating
with the Future
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